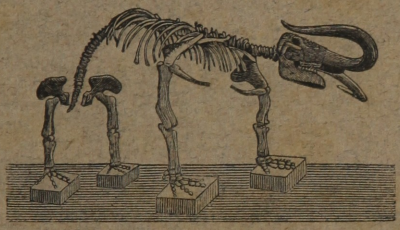
Koch (1)

DESCRIPTION

OF THE

MISSOURIUM,



OR

MISSOURI LEVIATHAN.

SECOND EDITION, ENLARGED.

LOUISVILLE, KY.
PRENTICE AND WEISSINGER, PRINTERS.
1841.

DESCRIPTION

OF THE

MISSOURIUM,

OR

MISSOURI LEVIATHAN;

TOGETHER WITH ITS SUPPOSED HABITS.

AND

INDIAN TRADITIONS

CONCERNING THE LOCATION FROM WHENCE IT WAS EXHUMED:

ALSO,

COMPARISONS OF THE WHALE, CROCODILE AND MISSOURIUM, WITH THE LEVIATHAN,

AS DESCRIBED IN 41ST CHAPTER OF THE BOOK OF JOB.

BY ALBERT KOCH.

LOUISVILLE, KY.
PRENTICE AND WEISSINGER, PRINTERS.
1841.

THE MISSOURIUM.

This gigantic skeleton measures 32 feet in length and 15 in height; the head measures, from the tip of the nose to the spine of the neck, 6 feet; from one zygomatic arch to the other, 4 feet; from the lower edge of the upper lip to the first edge of the front tooth, 20 inches; from the front point of the lower jaw to the first edge of the front tooth, 8 inches; from the edge of the upper lip, measuring along the roof of the mouth to the socket of the eye, 3 feet; from thence to where the atless joins the head, 10½ inches. The whole number of teeth is eight—that is, four upper and four lower, not including the two tusks. The two upper fore teeth are 4 inches broad and 4½ inches in length, and are situated in the head in such a manner that they slant towards the roof of the mouth, insomuch that their outer edge is 1¼ inch higher than their inside edge. The back teeth in the upper jaw are 7 inches in length, and where they unite with the front teeth, they are like those 4 inches broad, and from thence run narrower back until they end almost in a point. The formation of the nose is very peculiar: it consists of a bony substance interwoven with cells, and presents a broad, flat appearance; it projects 13 inches over the lower jaw, and ends in two nostrils, which are somewhat raised on the face. This nose rests partly on the roof of the mouth and partly on the upper lip, which latter is somewhat arched on both sides, and forms a ridge in the centre.

As I was successful in finding the right tusk solid in the head when I first discovered it, and as it remained fixed in its socket during its excavation and transportation over a very rough and wilderness country, I am enabled, therefore, to give a correct and indisputable description of the position and situation which the tusks occupied in the skull of the animal

during its life. They were carried by him almost horizontally, bending somewhat down, and coming with their points up again; their length is 10 feet, exclusive of 1 foot 3 inches, which forms the root, and is hidden from the eye of the observer, as it is concealed in and under the skull. It is necessary here to remark, that the tusks are remarkably large in proportion to the size of the head, and, also, that their roots are perfectly firm and solid, so as to leave only space for the nerve. The body of those tusks has been a formation of coarse ivory, partaking somewhat of the nature of bone—so much so, that it will again unite and become whole after an injury; which is proved by the fact of the right tusk having a large scar, where it had been severely injured. As soon as the tusks leave the interior of the head, which takes place opposite the chin, they run parallel on each side of the nose, sinking down to the edge of the upper lip, until they reach the outer edge of it; from thence they make a sudden bend and run from both sides in a horizontal position, each forming somewhat of a semicircle. Measuring those tusks from the point of the one to the point of the other, following the curvature, is 21 feet; the distance across the head in a straight line, from point to point of the tusks, is 15 feet.

Especially remarkable on the lower jaw is a protuberance, which is immediately situated over the *posterior mental foramen*, from whence it proceeds out of the *ramus* in a horizontal position; its point is somewhat bent down, inclining back; its length is $2\frac{3}{4}$ inches; its diameter at the root is $1\frac{1}{2}$ inches. I consider this protuberance peculiar to the Missourium, as I have never seen a similar one on any of the great number and variety of fossils I have disinterred or examined, or of animals of the present race, and as yet I have never heard it mentioned by other naturalists. Another peculiarity of this protuberance is, that it possesses points resembling thorns. I am of the opinion that the above described protuberance was the location of some remarkably strong muscles attached to the lower lip, that gave it in a great measure the strength and faculty of a proboscis. This wise and good provision of

nature has been necessary to the animal, as the upper part of the head has been destitute of this appendage, or, at most, has had a snout not larger than that of the South American tapir. The whole length of this the lower jaw, is 3 feet 1 inch; the greatest height to the condyle, 1 foot 7 inches; the extreme height to the coronoidal process, 1 foot 5¾ inches; the height of the ramus, 7½ inches; the length of the posterior molar, 7 inches; its breadth 4¼ inches; the length of the second molar, 5¼ inches; its breadth, 4 inches.

MEASUREMENT OF THE DIFFERENT BONES CONTAINED IN THE SKELETON.

Each clavicle 2 feet, ½ inch; and 7¼ inches in its extreme breadth. The first rib, 2 feet 3 inches in length; 6 inches in its widest part; the longest rib measures 5 feet 6½ inches in length; the shortest rib, 2 feet 4 inches in length; the largest of the dorsal vertebræ, 2½ feet; the scapula, or shoulder blade, 3 feet 1 inch in length, and 2 feet 7 inches in breadth; the humerus or fore arm, length 3 feet 5½ inches; its greatest circumference 3 feet 3 inches, and its smallest part measures 2 feet 7 inches in circumference; the ulna is 2 feet 7½ inches long; the radius is 2 feet 3¾ inches long; the carpal articulating surface is 5¾ inches broad; other articulating surface, 6½ inches. The pelvis measures from the anterior superior spine to the edge of the pubis, at the symphysis, 3 feet 7 inches, which gives a total breadth of the pelvis of 7 feet 2 inches; the circumference of each bone of the pelvis is 13 feet 4 inches.

The femur, or thigh bone, is 4 feet ½ inch long, 8¾ inches in diameter; in the middle of its shaft the neck of the thigh bone is 7¼ inches in diameter; the head of this is 8½ inches in diameter. The transverse diameter of the articulating surfaces or condyles of the femur is 10 inches; that is, each condyle measures 5 inches.

The tibia and fibula or leg bones.—The tibia is 2 feet 4¾ inches long; 11 inches broad at its superior portion, and 8

inches at the inferior part; its diameter in the middle of the shaft is 5¼ inches. *The fibula*—the whole length of this bone is 2 feet 6½ inches.

There is a process connecting the tail with the os sacrum which is 1 foot 8 inches in length; the said process is composed of six joints, which are inseparably joined together. Each of these joints is 3¼ inches in length; the one adjoining the os sacrum is 7¼ inches in breadth, but the remaining five joints of the process are rather narrower. The tail is composed of thirteen vertebræ, and is very short in proportion to the body of the animal, its whole length measuring only 2 feet 7½ inches, but has been very broad and flat, and possessed of great strength.

The fore foot has four toes and a thumb: the longest toe measures 1 foot 8 inches; the shortest, 1 foot; the thumb, 7 inches. Each toe is possessed of four joints, and the thumb of two. The smallest and last of the joints of each toe, shows plainly that it was armed with a nail; the nails of the right foot turned out towards the right, while those of the left were reversed and turned towards the left. The hind foot is much smaller than the fore foot; it has also four toes, but is destitute of the thumb. Its longest toe measures 1 foot 2 inches; its shortest, 9½ inches. Both the fore and hind feet have been webbed.

PECULIARITIES OF THE BONES.

All the bones, without exception, are firm, and contain no marrow; I believe the marrow was superceded by an oily fluid, which circulated through the bones.

All the vertebræ are remarkably narrow, and must have given the animal a superior degree of action in the back; this is more purticularly observable in the vertebræ of the neck, which gives it the appearance of being very short. The two posterior vertebræ adjoining the os sacrum are united in one, which appears to have given the back more elasticity.

The ribs are remarkably slender and short in proportion to

the size of the animal, and have had a great deal of cartilage attached to them: the six first are the strongest, and all have the singular peculiarity of standing half reversed in the body; that is, the edge of the rib bends in towards the intestines, and the opposite edge outwards, showing great lateral action.

COMPARISON OF THE LEVIATHAN WITH THE MASTODON.

The most striking difference between the Leviathan and the Mastodon, are, 1st, the Leviathan had no trunk, therefore could not be classed under the Probossa genus; 2d, its toes were armed with claws or nails, and this circumstance prevents its being classed with the hoofed animals, to which class the Mastodon belongs; 3d, the Leviathan has 24 dorsil vertebræ and 48 ribs, together with two collar bones or clavicles; whereas the Mastodon has 19 dorsil vertebræ and 38 ribs, and no clavicles; 4th, the scapula or shoulder blade is materially shorter in the Leviathan than in the Mastodon, also the ribs are much smaller; 5th, the dental system at the first view somewhat resembles that of the Mastodon, but upon a close examination the observer will perceive that the teeth of the Leviathan are much smaller in proportion to the maxilary bones than those of the Mastodon, and also better calculated for masticulating softer substances.

SUPPOSED HABITS AND NATURE OF THE ANIMAL.

The animal has been without doubt an inhabitant of water courses, such as large rivers and lakes, which is proven by the formation of the bones: 1st, his feet were webbed; 2d, all his bones were solid and without marrow, as the aquatic animals of the present day; 3d, his ribs were too small and slender to resist the many pressures and bruises they would be subject to on land; 4th, his legs are short and thick; 5th, his tail is flat and broad: 6th and last, his tusks are so situated in the head that it would be utterly impossible for him

to exist in a timbered country. His food consisted as much of vegetables as flesh, although he undoubtedly consumed a great abundance of the latter, and was capable of feeding himself with the fore foot, after the manner of the beaver or otter, and possessed, also, like the hypopotamus, the faculty of walking on the bottom of waters, and rose occasionally to take air.

The singular position of the tusks has been very wisely adapted by the Creator for the protection of the body from the many injuries to which it would be exposed while swimming or walking under the water; and in addition to this, it appears that the animal has been covered with the same armor as the alligator, or perhaps the megatherium.

THE LOCATION AND EXCAVATION OF THE BONES.

The bones were found by me near the shores of the river *La Pomme de Terre*, a tributary of the Osage river, in Benton county, in the state of Missouri, Latitude 40 and Longitude 18. There is every reason to believe that the Pomme de Terre, at some former period, was a large and magnificent stream, from one half to three-fourths of a mile in breadth, and that its waters washed the high rocky bluffs on either side, where the marks of the rolling surges are now perfectly plain: they present a similar appearance to that of the Missouri and Mississippi. It appears from the different strata, that since the Missourium existed, six or seven different changes have taken place here, by which the original bed of the Pomme de Terre was filled with as many different strata, which are as follows:

The original stratum on which this former river flowed at the time it was inhabited by the Missourium, and up to the time of its destruction, consisted of quicksand; on the surface of this stratum, and partly mingled with it, was the deposite of the before described skeleton. The next is a stratum from three to four feet in thickness, consisting of a brown alluvial soil: in this all the remainder of the skeleton was

contained, and covered by it. This stratum was mixed with a great quantity of vegetable matter, and most of this is in a wonderful state of preservation; but what is still more surprising, all the vegetable remains are of a tropical or very low southern production. They consisted of large quantities of cypress burs, wood and bark: a great deal of tropical cane and tropical swamp moss; several stumps of trees, if not logwood, yet bearing a very close resemblance to it; even the greater part of a flower of the Strelitzia class, which, when destroyed, was not full blown, was discovered embedded in in this layer; also, several stems of palmetto leaf, one possessing all the fibres perfect, or nearly so. To those who are not acquainted with the nature of this plant, it is well to remark, that it is not found at present farther north than the northern parts of Louisiana.

The time when the revolution of the earth took place, during which this before described animal lost its life, was between the 15th of September and 20th of October, which is proven by the fact just mentioned of the cypress burs being found; from which circumstance might be readily inferred, that they had been torn by force from their parent stem before they had arrived at perfection, and were involved in one common ruin with the trees which bore them, these having been torn up by the roots, and twisted and split into a thousand pieces, apparently by lightning, combined with a tremendous tempest or tornado. There was no sign or indication of any very large trees, the cypresses that were discovered being the largest that were ever growing here at the time.

Through this stratum ran several veins of iron ore—sufficient evidence of the antiquity of this deposite. Immediately over this was one of blue clay, 3 feet in thickness; the next was one of gravel from 9 to 18 inches in thickness, so hard compressed together that it resembled pudding stone; the next was a layer of light blue clay, from 3 to 4 feet in thickness: on this was another stratum of gravel, of the same thickness and appearance of the one first mentioned; this was

succeeded by a layer of yellowish clay, from 2 to 3 feet in thickness; over this, a third layer of gravel, of the same appearance and thickness; and, at last, the present surfrce, consisting of a brownish clay, mingled with a few pebbles, and covered with large oak, maple and elm trees, which were as near as I could ascertain, from 80 to 100 years old. In the centre of the above mentioned deposite was a large spring which appeared to rise from the very bowels of the earth, as it was never affected by the severest rain, or did it become lower by the longest drought.

About 200 yards from said deposite stands a singularly formed rock, which not only bears the appearance, but can be considered as a monument of great antiquity, formed by nature, against whose rough and rugged sides can be distinctly traced, in deep and furrowed lines, the former course of angry waters; yet its summit is full 30 feet above the present level of the Pomme de Terre. The rock has the appearance of a pillar, on whose top rests a table rock far projecting over on every side; from the base of the pillar to the lower edge of the table is 30 feet, and from the base down to the deposite of the bones, is 16 feet—making, from the stratum on which the bones were deposited to the edge of the table 46 feet.

By a minute and close examination, I found that the formation of the said rock, as it now appears, was produced by the long action of the river against and around it; and had the river continued to act with the same force for one or two hundred years longer, the pillar would have been so far worn away, that the table must have fallen. It now stands as an indisputable witness, that the water, at the time these animals existed, was at least 46 feet in depth.

INDIAN TRADITIONS.

It is perfectly true that we cannot, with any degree of certainty, depend on Indian traditions; but it is equally true that generally these traditions are founded on events which

have actually transpired, and according to their importance in relation to the welfare of the aborigines among whom they occurred, and in absence of any better method of perpetuating them, are transmitted with great care in their legends from generation to generation; but in the course of time, as might reasonably be expected, these traditions lose much in correctness and minuteness of detail, owing to the circumstances, more or less, in which the tribes have been placed. As I am constrained to confine my remarks within very circumscribed limits, I will only relate one of the traditions having reference to the existence of the before described animal: this one, however, led principally to its discovery.

At the time when the first white settlers emigrated to the Osage country, (as this section of territory is usually called,) it was inhabited by the Osage Indians, and the river by which it is watered was called the Big Bone river, owing to a tradition preserved by them, which they stated as follows:

There was a time when the Indians paddled their canoes over the now extensive prairies of Missouri, and encamped or hunted on the bluffs. (These bluffs vary from 50 to 400 feet in perpendicular height.) That at a certain period many large and monstrous animals came from the eastward, along and up the Mississippi and Missouri rivers; upon which the animals that had previously occupied the country became very angry, and at last so enraged and infuriated, by reason of these intrusions, that the red man durst not venture out to hunt any more, and was consequently reduced to great distress. At this time a large number of these huge monsters assembled here, when a terrible battle ensued, in waich many on both sides were killed, and the remainder resumed their march towards the setting sun. Near the bluffs which are at present known by the name of the Rocky Ridge, one of the greatest of these battles was fought. Immediately after the battle, the Indians gathered together many of the slaughtered animals, and offered them on the spot as a burnt sacrifice to the Great Spirit; the remainder were buried by the Great

Spirit himself in the before mentioned Pomme de Terre, which from this time took the name of the Big Bone river, as well as the Osage, of which the Pomme de Terre is a branch. From this time the Indians brought their yearly sacrifice to this place, and offered it up to the Graeat Spirit as a thank-offering for their timely deliverance; and more latterly, they have offered their sacrifice on the table rock previously mentioned, which was held in great veneration, and considered holy ground.

This ceremony was kept up with the utmost rigidity until one of the white emigrants settled in the valley at the foot of the rock, with the intention of making himself and family a permanent residence on this fertile spot; but he did not long enjoy this beautiful situation, for on the return of the Indians to offer their wonted sacrifice, they beheld with indignation and astonishment the intrusion of this venturesome settler on their sacred ground. Soon the council fire was kindled, when the Indians gave their accustomed murmur of dissatisfaction, and immediately the white man was obliged to leave, without the least preliminary ceremony. Some time after this, on becoming better acquainted with his red neighbors, and having through much perseverance gained their good opinion, after much reluctance on their part, and explanations and assurances that he would not infringe on their sacred privileges, and would only raise corn and potatoes for his family, he was once more permitted to settle on this sacred spot, of which he retained peaceable possession until the return of some old chiefs, who had been for a long time absent. They in turn were exasperated to madness on seeing the violation of the sacred ground of their forefathers by the encroachment of the white man, and again the poor farmer was obliged to leave. From that time this spot remained in the hands of the Indians, and no entreaty or allurement could be held out to induce them to resign it, until they were removed by the government; it then for the third time fell into the hands of the original settler, who joyfully took possession of the place he had so long desired to make his home.

After a while other settlers arrived, and as the want of a mill for grinding their different kinds of grain began to be felt—each family having hitherto been obliged, in order to obtain a supply of meal, to resort to the laborious process of pounding their corn in mortars—the old farmer resolved on building a tub mill for the accommodation of himself and his neighbors. In order to procure the necessary water power, the aid of the before mentioned spring was brought into requisition; and in making the necessary excavation, the laborers found several bones of young mastodons, which excited their curiosity and astonishment, but they suspended their labor on ascertaining that the force of said spring was not sufficient for their purpose. Soon after this the place was sold, and the excitement about the bones and the Indians was forgotten until the summer of 1839, at which time a young man, who was employed to clean said spring, found a tooth of a mastodon during his labor; which occurrence reminded several of the old settlers of the former transactions and traditions, and a narration of these induced a few persons residing in that vicinity, out of mere curiosity, to make further examination as to what was contained in the spring. They succeeded in finding several bones and teeth; but the mud and water accumulated so fast, they soon became discouraged with the difficulties attending the search, and gave it over. Some of these facts came to my knowledge in March, 1840, on my return to St. Louis from an excursion to the southwestern part of the country, when I immediately repaired to the spot, and found the facts as I have here stated.

COMPARISON OF THE MISSOURIUM WITH THE LEVIATHAN, AS DESCRIBED IN THE 41ST CHAPTER OF THE BOOK OF JOB.

Thus far the leviathan has been considered the whale by many scientific men—by others, the crocodile of the Nile; but as there is no aquatic animal known that will bear a close comparison with the leviathan as described in the book of Job,—these just mentioned but slightly answering the description in some points, and in others not at all; therefore none

could be acknowledged, with any degree of certainty, as the one alluded to. For instance, the great and good man, and profound investigator, Dr. Adam Clark, in his concluding observations on this chapter, very excellently and truly remarks:

"After all, what is the leviathan? I have strong doubts whether whale or crocodile be meant. I think even the crocodile overrated by this description: he is too great, too powerful, too important in this description. No beast, terrestrial or aquatic, deserves the high character here given; although that character only considers him as unconquerably strong, ferociously cruel, and wonderfully made! Perhaps the leviathan was some extinct mammoth of the waters, as the behemoth was of the land. However, I have followed the general opinion by treating him as the crocodile throughout these notes, but could not finish without stating my doubts on this subject; though I have nothing better to offer in place of the animal in behalf of which almost all learned men and critics argue, and concerning which they generally agree."

After having examined this subject in all its bearings, I have come to the conclusion that the leviathan here alluded to is none other than the Missourium before described, and from this time I shall call it the Missouri Leviathan, (*Leviathan Missourii.*)

Let us now compare the leviathan with the whale. In the 41st chapter, 2d verse, is recorded: "Canst thou put a hook into his nose? or bore his jaw through with a thorn?" Reference is here made to the singularly hard construction of his nose, which peculiarity cannot with any degree of propriety be applied to the whale, as his head and nose are not particularly hard, but more of a soft and gristly substance, and contain great quantities of spermaceti.

In verse 3d: "Will he make many supplications unto thee? will he speak soft words unto thee?" Here it is expressly admitted that the animal was possessed of a voice or organs of sound, and that he was capable not only of emitting soft speech or sounds, but also of loud and hoarse sounds. Now it is well known that the whale is entirely destitute of these or-

gans, and is not capable of emitting or making any sound save that which is caused by the rushing of the water through the ejecting orifice in the head.

The 6th verse says—"Shall thy companions make a banquet of him? shall they part him among the merchants?" There is no animal in creation which affords more material for barter than the whale, as from him is procured the sperm, the whalebone, and the oil.

The 7th verse—"Canst thou fill his skin with barbed irons? or his head with fish spears?" It is well known that the whale is harpooned, and that the harpoon not only enters deep into the skin, but also deep into the flesh.

The 8th and 9th verses—"Lay thine hand upon him, remember the battle, do no more. Behold, the hope of him is in vain: shall not one be cast down even at the sight of him?" Here the ferocious and horrid appearance of the animal is fully demonstrated. It is a well ascertained fact that the whale is a harmless and inoffensive animal, and when pursued only endeavors to escape.

The 14th verse—"Who can open the doors of his face? his teeth are terrible round about." Every one knows, who is at all informed on the subject, that only one species of the whale, and that the smallest, has teeth.

The 15th, 16th and 17th verses—"His scales are his pride, shut up together as with a close seal. One is so near to another, that no air can come between them. They are joined one to another, they stick together that they cannot be sundered." The whale has neither scales nor armour.

I will now compare this monster with the crocodile. Were the crocodile seven or eight times larger than it is, it would bear a much nearer resemblance to the leviathan than the whale;—but if we look at the 22d verse, which reads, "In his neck remaineth strengh," another great dissimilarity is apparent; for the crocodile, being of the lizard species, has no neck, and in common with all animals of this class, possesses the most power in his tail. Hear Dr. Clark's opinion of this verse: "Literally 'Strength has its dwelling in his neck." The neck is the seat of strength in most animals; but

the head and shoulders must be here meant, as the crocodile has no neck, being very nearly shaped like the lizard." But the language of the 22d verse is too plain to be misunderstood; it particularly points out the neck as being formed for great power and strength. There are many other points on which this animal will not bear a comparison with the leviathan, but the limits of these lines will not permit me to dwell on them any longer.

COMPARISON OF THE LEVIATHAN WITH THE MISSOURIUM.

The first verse of the before mentioned chapter says, "Canst thou draw out leviathan with a hook? or his tongue with a cord which thou lettest down?" The Missourium, as I have described it, was a creature of enormous magnitude, ferocity and strength, as well as fleetness in swimming; and by reason of his great weight and strength, could attack the largest animals with impunity, and overcome them with ease; nor is it probable that any combination of human force was able to draw him out of his native element.

The 2nd verse: "Canst thou put a hook into his nose?" &c. Here reference is made to the singular formation of this organ, which, as before stated, does not consist of a soft gristly substance, but is of such a hard bony nature, that putting a hook through it would be impracticable.

The 3d and 4th verses: "Will he make many supplications unto thee? will he speak soft words unto thee? will he make a covenant with thee? wilt thou take him for a servant for ever?" Allusion is here made to his cross, untameable and ferocious disposition; as also, to the impossibility of making him serviceable for any domestic use or purposes whatever. The same is the meaning of the 5th verse.

The 6th verse says—"Shall thy companions make a banquet of him? shall they part him among the merchants?" There was no part of the Missourium that could be converted into merchandise, as even his tusks were of too coarse and porous a nature to be used as ivory; and being carniverous, his food consisting in a great measure of the crocodile and

other southern amphibious animals, would render his flesh utterly unfit for food either for man or beast.

Verse 7th—"Canst thou fill his skin with barbed irons? or his head with fish spears?" On the hard armor of the Missourium no barbed iron, harpoon, or spear, would make any impression.

From the 8th to the 11th verse is shown the immense strength, power and ferocity of the animal. The Missourium shows indisputable marks that he was possessed in a high degree of all these characteristics.

Verse 12th—"I will not conceal his parts, nor his power, nor his comely proportion." This alludes to the circumstance that the animal was not altogether of an aquatic nature, but visited occasionally the land; therefore none of his parts or comely proportions were concealed, as would have been the case had he been entirely aquatic, for then his form would have been more or less hidden by the surrounding fluid.

The 13th and 14th verse—"Who can discover the face of his garment? or who can come to him with his double bridle? Who can open the doors of his face? his teeth are terrible round about." The first sentence again has reference to his shield or covering. Doubtless no one could approach him without incurring imminent danger—not even near enough to discover the face of his garment; or, in other words, to examine the construction and particular parts of his covering. The latter part of the 13th and the whole of the 14th verse, take particular notice of his enormous grinders and immense tusks, more especially to the situation which these latter occupy in the skull. Reference is also made to the manner of catching wild animals by means of the lasso, or double bridle, as practised in the east, and of the futileness of an attempt to capture the animal in this way. From this circumstance I am satisfied that this could have been no other animal, either fossil or living, heretofore discovered, than the Missourium; and whoever will for one moment examine the head must be struck with the remarkable similitude already noticed: the tusks coming out of the head until they arrive at a parallel with the nose, then turning suddenly back and form-

ing a semicircle around the head, (like a shield, to prevent any thing from approaching it,) and measuring from point to point, in a straight line over the head, 15 feet. It can be seen at once how utterly futile would be any attept to cast a bridle over him, even allowing the animal to be perfectly gentle. And again in said verse the peculiar position of these tusks is remarked: "His teeth are terrible round about." Tusks are ever considered as teeth, which they are.

In the 22d verse—"In his neck remaineth strength," &c. The structure of the neck of the Missourium exhibits an unusual degree of strength, and is in fact necessary to the support of his enormous tusks. The verses that I have not quoted treat of the natural history of the animal, but there is nothing mentioned in them that can be construed into a contradiction of the above comparison; on the contrary, were we acquainted with the true history of the Missourium, and its peculiar habits, I am fully convinced that the description given in the book of Job would be in every particular minutely correct.

Before closing this subject, I will refer to the 34th and last verse of the same chapter before mentioned—"He beholdeth all high things: he is a king over all the children of pride." Here it is said that no created being can come into competition with him and prosper. Whoever examines his gigantic remains will acknowledge the justness of the above remark, and that he was indeed king over all the brute creation.

As some may perhaps be ready to enquire how the leviathan, which is described as being an inhabitant of Asia, came to be found in the extreme west of the globe, I will merely refer such persons to the history of all living animals, as well as those now extinct, of the same species, which are distributed over different parts of the world. Notwithstanding the great difference of climate and other local causes, they can still be recognized as the same animals, having but few marks of distinction. There is for instance, the elephant found alive in Africa and Asia, and in a fossil state in the north and west of America; the mastodon found in a fossil state in America, Europe, and some other parts of the globe, and thus of smaller living and fossil animals: therefore there was nothing to prevent the leviathan from being an inhabitant of the great waters of America, as well as those of Asia. The reader will have de-

cided, from reading the analysis of the deposite in which the skeleton was found, that the Missourium was a tropical animal.

EVIDENCES OF HUMAN EXISTENCE CONTEMPORARY WITH FOSSIL ANIMALS.

It is well known by all persons acquainted with geology, that it is admitted as a fact, that the mastodons, together with the generality of antideluvian animals, existed and become extict previous to the creation of the race of men; which supposition was founded on the fact that no evidence of human existence could be traced back to, or found with, those antideluvian animals. The positive cause of this I do not know. My opinion, however, is that this want of evidence of a former human race is, that those relicts of the ancient animal world generally, have been found accidentally by persons who were not aware of the importance of a minute and critical examination of the deposites disinterred by them, and therefore the scientific observer was deprived, no doubt, often of the facts necessary to be known in order to form correct opinions on this subject. In view of this I deem it my duty to lay before the world what facts I have been able to gather on this interesting subject, which will be strong evidence in favor of my belief, that there was a human race existing contemporary with those animals.

These facts are as follows: In October, 1838, I disinterred the remains of an animal which had clawed feet and was of the size of an elephant. This deposite was in Gasconade county, Missouri, on the shores of the Burbois river. The principal part of this animal had been consumed by a fire, which fire evidently had not been produced by a volcanic eruption, but had been formed and kindled mechanically by human hands, as it appeared, for the purpose of destroying the before mentioned animal, which had been mired here and was unable to extricate itself. The particulars of the transaction are as follows:

A farmer in Gasconade county, Missouri, perceived for some time a disagreeable taste in the water which he had used for his household. This water was taken out of a clear spring, situated in what is usually called a bottom, near his house. For the purpose of remedying this evil, he dug around and into the spring, thus to be enabled to enclose it afterwards as a well. By doing so, he found several bones belonging to an animal of an unusually large size. Some were whole, and some in fragments. Also at the same time he found a stone knife and an Indian axe. This circumstance created some excitement in the neighborhood; and these transactions were mentioned to me some time afterwards by a Mr. Wash, who lived in the vicinity.

On hearing this, I immediately made arrangements to proceed to the place. On my arrival there, in October, 1838, I found the prospects rather dull; as the bones which had been dug out of the spring were principally destroyed. They had been removed from

their place of embedment without the least care, and were of course more or less broken; then exposed to the air without any kind of preservation being applied to them; and eventually what few remained tolerably whole, were broken by their curious visitors, to ascertain if they contained marrow; until the few remaining fragments were collected together by an intelligent gentleman by the name of Bailey, residing in the neighborhood, who presented them to me, and assisted me in my farther researches. I found nine feet beneath the surface a layer of ashes from six to twelve inches in thickness, mingled with charcoal, large pieces of wood partly burned, together with Indian implements of war, as stone arrow-heads, tomahawks, &c. &c. Also more than one hundred and fifty pieces of rocks, varying from three to twenty-five pounds in weight, which must have been carried here from the rocky shores of the Burboise river, a distance of 300 yards; as there was no rock, stones, or even gravel near to be found; and those pieces of rocks taken out of the ashes were precisely the same as that found on the river, which is a species of limestone; these had been thrown evidently with the intention of striking the animal. I found the fore and hind foot standing in a perpendicular position; and likewise the full length of the leg below the layer of ashes, so deep in the mud and water that the fire had no effect on them.

The fore foot of the animal consists of four toes and a thumb; each toe has five joints, each last joint was armed with a claw, or long nail. The thumb has two joints; the crown of the foot is composed of four bones, joined together, and each connected to a toe. On the top of this is a thin, round bone, connecting them with the shin bone. The construction of this foot shows that it possessed much power in grasping and holding objects. The hind foot is smaller, and has also four toes, with five joints, but has no thumb. The crown is entirely different in construction from that of the fore foot. A few of the teeth appeared to have been broken out by the force of the rocks thrown at the head of the animal, and were carried some little distance; so that they escaped in a measure the violence of the fire, and have all the appearance of those of a carniverous animal.

The second trace of human existence with these animals, I found during the excavation of the Missouri Leviathan. There was embedded immediately under the femur or hind leg bone of this animal, an arrow-head of rose colored flint, resembling those used by the American Indians, but of a larger size. This was the only arrow head immediately with the skeleton; but in the same strata at a distance of five or six feet, in a horizontal direction, four more arrow-heads were found; three of these were of the same formation as the preceding; the fourth was of a very rude workmanship. One of the last mentioned three was of agate, the others of blue flint. These arrow-heads are indisputably the work of human hands. I examined the deposite in which they were embedded, and raised them out of their embedment with my own hands.